

REMARKS

Applicants respectfully request reconsideration of the rejection of the claims in view of the remarks set forth below. Claims 1-20 remain in the application. Claims 1, 4, 5, 9, 12, 13, 18, and 19 have been amended. Claims 2, 3, 5-8, 10-11, 14-17, and 20 remain unchanged.

Objections to Claims

Claims 1-8, 12, 13, 18, and 19 are objected to for containing informalities. Claims 1, 4, and 5, 12, 13, 18, and 19 have been amended in response to the examiner's objection. Applicants respectfully request that the objection to claims 1-8, 12, 13, 18, and 19 be withdrawn.

35 U.S.C. §103

Claims 1-3, 6, 16, 17, 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sourour et al (US 6421371; hereafter "Sourour"). Applicants respectfully traverse this rejection.

Amended claim 1 recites, inter alia, "apparatus for performing a pilot synchronization . . . comprising . . . a plurality of sliding correlators that each receives a portion of a received correlation sequence and provides a partial correlation output . . . a plurality of absolute value blocks that take a respective absolute value of each partial correlation output . . . and circuitry that combines the absolute values of each of the absolute value outputs to form a correlation output." Sourour fails to teach or suggest all of the elements of amended claim 1.

Sourour teaches an apparatus for performing a synchronization in a wireless communication system. The apparatus uses a series of sliding correlators on a partial correlation sequence. The apparatus further combines the magnitude squared values of the outputs of the correlators to determine whether the signal is properly synchronized. In contrast, claim 1 recites "a plurality of absolute value blocks that take a respective absolute value of each partial correlation output . . . and circuitry that combines the absolute values of each of the absolute value outputs to form a correlation output." As stated, Sourour focuses on making a decision regarding synchronization, given the presence of an

offset in the synchronization signal, using the magnitude squared values from the correlators. There is a distinct difference between using the absolute value and the magnitude squared value. The absolute values of each of the correlators maintain a linear relationship in the present invention. In contrast, Sourour teaches the use of magnitude squared values creating a nonlinear relation between the outputs of correlators. The nonlinear relation creates deference to certain values at the outputs of the correlators over other values. For instance, the nonlinear relation may provide undesirable deference to the errors found in the presence of higher frequency offsets. The present invention addresses the correction of errors due to the presence of relatively high frequency offsets. See, for instance, page 1 line 30 to page 2 line 3. Therefore, the claimed element of "a plurality of absolute value blocks that take a respective absolute value of each partial correlation output" is an important aspect of the applicants' claimed invention.

Sourour does not teach the importance of the difference between the use of the absolute value and the use of the magnitude squared value. The effect is not recognized in Sourour because it does not address the problem presented in the present invention, namely identifying and correcting relatively high frequency offsets. A person skilled in the art looking to the teaching of Sourour would similarly not recognize what advantages may exist with using the magnitude value as opposed to the magnitude squared value to correct for relatively high frequency offsets. As a result, it is respectfully proposed that the rejection for obviousness under 35 U.S.C. § 103(a) is overcome and notice to that effect is earnestly solicited.

Dependent claims 2-8 being dependent on and further limiting independent claim 1, should be allowable for that reason, as well as for the additional recitations that they contain. Therefore, it is respectfully proposed that the rejection of claims 2-8 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Independent claim 16 includes elements similar to the elements of independent claim 1 and should therefore be allowable for the same reasons discussed above as well as for the additional recitations contained therein. Therefore, it is respectfully proposed that the rejection under 35 U.S.C. § 103(a) is

overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Dependent claims 17- 20, being dependent on and further limiting independent claim 16, should be allowable for that reason, as well as for the additional recitations that they contain. Therefore, it is respectfully proposed that the rejection of claims 17 - 20 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Claims 9-11, 14, and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Schelm et al (US Pub No. 2003/0235238; hereafter "Schelm") in view of Sourour. Applicants respectfully traverse this rejection. (note fix the claim 9 language?)

Amended claim 9 recites, inter alia, " A code division multiple access ("CDMA") receiver, comprising . . . an analog-to-digital converter . . . a matched filter . . . a tapped delay line . . . and a cell search block, comprising . . .a plurality of sliding correlators that each receives at least a portion of the delayed filtered digital signal and provides a partial correlation output . . . an absolute value block that takes the absolute value of each partial correlation output . . . and circuitry that combines the absolute values of each of the absolute value block to form a correlation output." Schelm, Sourour, or the combination of the two fails teach or suggest all of the elements of this claim.

As noted earlier for claims 1, Sourour fails to teach or suggest the use of absolute value blocks. Claim 9 recites, inter alia, "an absolute value block that take a respective absolute value of each partial correlation output . . . and circuitry that combines the absolute values of the absolute value block to form a correlation output." Sourour fails to teach or suggest the use of an absolute value block. Schelm is unable to remedy this deficiency in Sourour. In particular, Schelm teaches a receiver comprising an analog to digital converter, a matched filter, a tapped delay line, and a cell search block. However, Schelm does not teach that the cell search block is comprised of a plurality of sliding correlators that each receives at least a portion of the delayed filtered digital signal and provides a partial correlation output, an absolute value block that takes the absolute value of each partial correlation output, and circuitry that combines the absolute values of

each of the partial correlation outputs to form a correlation output. Therefore Schelm fails to remedy the deficiency of Sourour. Accordingly the combination of Schelm and Sourour fails to teach all of the elements of claim 9. Therefore, it is respectfully proposed that the rejection under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

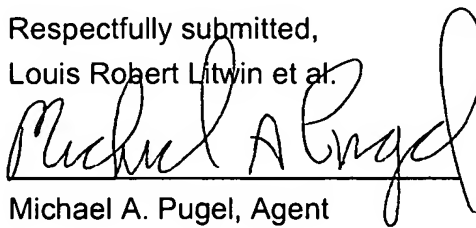
Dependent claims 10-15, being dependent on and further limiting independent claim 9, should be allowable for that reason, as well as for the additional recitations that they contain. Therefore, it is respectfully proposed that the rejection of claims 10-15 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Conclusion

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicants' agent at (317) 587-4027, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due in regard to the present amendment. However, if a fee is due, please charge the fee to Deposit Account 07-0832.

Respectfully submitted,
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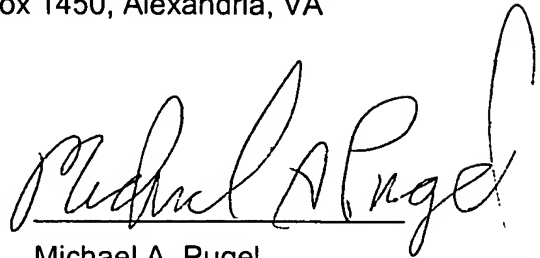
Date: June 16, 2006

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I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

JUNE 16, 2006

Date


Michael A. Pugel